

TO STUDY THE SHARE AND CONTRIBUTION OF FOOD PROCESSING IN INDIAN ECONOMY

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ABSTRACT

Food processing is the conversion of agricultural products to stuff which have specific textural, nutritional, and sensory properties using commercially viable methods. Various keys factors like easy marketing & distribution, consumer's convenience, hygiene, enhanced food consistency, throughout availability of the product are causing the industry to gear up. It was seen that the post-independence era in India observed high growth in the processing sector especially after 1980. The objective of this study is to study the importance of food processing industry in Indian economy. The current study is based on secondary data. The relevant material and secondary data were collected through various sources. Thus, it will help in implications of various policies for better and smooth functioning of the sector.

KEYWORDS: Food Processing, Economic, Employment, Industry & Growth

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1. INTRODUCTION

Food Processing industry which is recognized by the sunrise industry had acquired enormous importance in the recent years. Changing lifestyle, accessibility of raw materials and various suitable fiscal policies have given huge push to the evolution of this sector. The sector serves as an important connection between industrial and agricultural segment of the economy. Establishing the link is of great importance to cut waste of raw material, enhance the worth of agricultural produce by growing shelf life as well as stimulating the nourishing capacity of the food and safeguard lucrative fees to producers as well as affordable prices to consumers. Sufficient emphasis on the food processing sector could raise our apprehensions on food security and food inflation. India is one of prominent exporter of several food products. To ensure that the sector gets the sufficient push in the sector the government is implementing various schemes for technology upgradation, modernisation, human resource development, infrastructure development and R &D.

Food Industry is a vital part of Indian economy which helps in producing both employment and GDP in past years. As per the latest data, the food processing industry contributes to 32 % of the total country's food market and occupies 5th rank in production, consumption, expected growth and export. Beside this 13 % of India's exports trade and 6 % of industrial investments adds to food processing industry. During FY 11-16, the Indian exports of processed food and related products grew at around CAGR of 11.74 %. As per DIPPI, the Industry has already received around US\$ 7.54 billion worth and FDI during the period April 2000- March 2017.

2. LITERATURE REVIEW

Johnston (1961) discussed the misleading dichotomy prevailing between the two sectors that are- agricultural vs.

industrial. The paper had examined the interrelationships existing between agricultural and industrial development and to illustrate the scope of agricultural processes in the said growth of the economic. The study of the paper helped to understand the relationship between agriculture and industry which are the two vital pillars of the Indian economy, thus making this study vital for our research. Mitra (1999) calculated that the technical efficiency & total factor productivity growth for 17 two-digit industry groups consisting 15 major states in India. The study identified that the innovation in technology, active employment of inputs and enhanced infrastructure facilities have contributed to this regard. Wilkinson (2004) talked about the effect of the globalization in food processing industries in most of the developing countries. The study recognizes that opportunity for developing countries exist in exporting processed foods especially in sea foods and fruit & vegetables. Kachru (2006) expressed that Agro processing is regarded as the sunrise industry of the Indian economy. The paper summarized the food processing sector evolution describing the role of R & D, the latest trends, status of the Agro-processing industry, and problems crop-wise.

Ohlan (2013) studied the Efficiency & Total Factor Productivity Growth in Indian Dairy Sector over the period 1980-2008. It was observed that there was an average 72% technical efficiency level. Further, the decomposition of TFP growth shows that growth is driven largely by technical efficiency changes rather than by scale efficiency. Vipin (2016) studied the efficiency & technological aspects related to the Indian food processing industry during 2000-2015 by collecting data from firm level. Both the aspect study was to measure technical efficiency of the distinct production units of the industry & to evaluate the extent of diverse technologies used across its different groups. The results showed that dairy & sugar processing units had lesser technical efficiency suggesting opportunity to enhance their total presentation to a considerable amount via technological Upgradation

3. RESEARCH OBJECTIVES

To study the share of Food Processing industry in Indian Economy

4. METHODS AND MATERIALS

The present study used the secondary data. The significant material and secondary data were collected from various sources, official and unofficial both. Reports from various government agencies like the Ministry of Food Processing Industries (MOFPI), Ministry of Finance, Ministry of Agriculture and Co-operation, Department of Industrial Policy and Promotion (DIPP), etc. The secondary data was collected from different issues of Annual Survey of Industries for a period of ten years (2004-05 to 2017)

5. RESULTS AND DISCUSSIONS

5.1 Food Processing Industry and Indian GDP

Gross Domestic Product (GDP) per capita is a system of measurement in which country's economic output is broken down on per person basis. It is calculated by dividing the GDP of a country by its population. These calculations are done by World Bank and International Monetary Fund. During the research period, one can see that GDP per capita has seen a gradual increasing growth. It could be seen that the performance of food processing sector has progressed considerably in the recent years. The FPI performance has increased substantially in 2011-12 recording a growth of 21.6 %. In the year 2012-13 the growth of this sector reduced down along with the decelerated growth both in agriculture & manufacturing sector, even though the growth of the sector was higher than both the agriculture and manufacturing sector. The decline in the share of Agricultural & allied sectors in GDP of the country as compared to various other sectors is owing to structural

changes because of shift from a conventional agrarian economy to industry & service dominated one. The food processing sector comprised of as much as 11.11 % and 8.98 % of GVA in Agriculture and manufacturing sector respectively in 2018-19 at 2011-12 prices (MOFPI Report).

Table 1

(AAGR)	Growth												
	2004-05	2005-06	2006-08	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2016-17	2017-18
GDP at Factor Cost	8.8	8.9	9.6	9.3	6.7	8.6	8.9	6.7	4.5	7.1	6.23	7.97	6.59
GDP-Agriculture	4.98	5.55	4.3	6.3	-0.1	0.6	9.3	5.4	1.3	0.23	1.69	6.81	5.91
GDP: Manufacturing	11	11.23	14.3	10.3	4.3	11.3	8.9	7.4	1.1	6.6	6.3	7.93	6.57
GDP-FPI	7.2	7.52	9.4	9.9	5.3	2.7	14.9	21.6	4.66	4.32	7.13	11.18	6.7

(Source: India Stat)

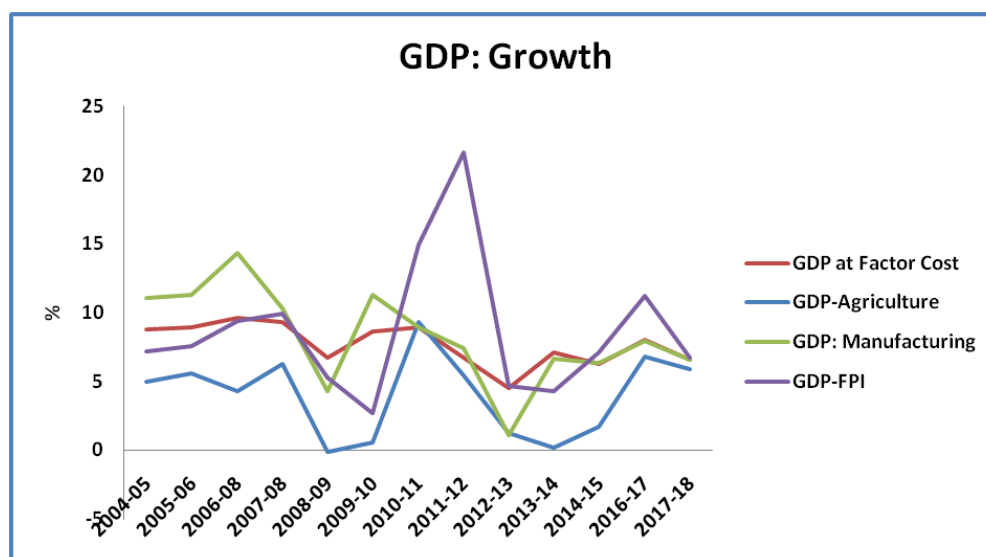


Figure 1

Source: MOFPI

The graphs depicts that the FPI sector's contribution to GDP has been increasing a much quicker rate than agriculture. If the impact to GDP of both food processing sector and agriculture were rising at the constant rate, then it would suggest that the development in food processing sector is only because of rise in amount of agricultural raw material. The graphs signify is that a large number of products of agricultural are being transformed (value terms) to different food products. Thus, showing that how food processing in value terms has been growing that impacting the Indian economy.

5.2 Food Processing and Indian Trade & Balance of Payment

Export is concerned with the goods & services that are produced in one country and sold in another country. When export

is combined with import, it is termed as international trade. From 2000-01 till 2008-09 the export has shown a gradual increase and steep increase was observed in the year 2010 till 2014 with the gradual decline in 2014-15. This was due to rupee depreciation which further decreased 2017 onwards due to change in economic change (demonetization) exporters suffered liquidity shock (EXIM 2018). It can be seen that the value of exports is showing an increasing trend and growing with a CAGR of 21.41 % throughout the research period.

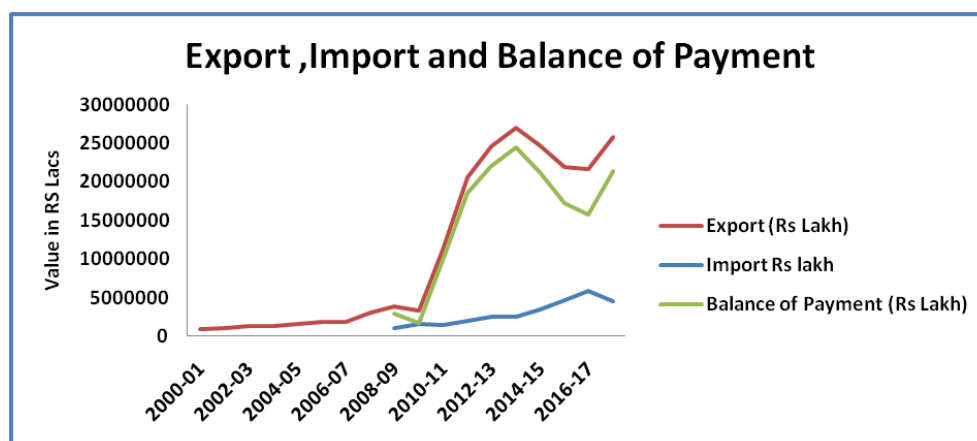


Figure 2

Source: MOFPI

The data of import has been available from the year 2008-09. Import has been considered as the goods brought or purchased in home country from the foreign country. Considering the processed food industry, items such as mayonnaise, ice creams and sausages are imported. Till 2016, the import has shown gradual increase but then declining trend can be observed due to strict norms set by the Indian government. From November 2016, India increased import duties from 0 % to 60 % on chickpeas, 50 % on peas, 40 % on large chickpeas, & 30 % on lentils, highly effecting U.S. pulse exports to India and thus decline imports.

The average segment of India's agriculture exports (15.24%) was higher than the average share of agriculture imports (4.85%) from time period 2000-01 to 2016-17. BOP is growing at a CAGR rate of 24.69 %. This is a good sign, as the balance of payment is positive

5.3 Food Processing Industry and Indian FDI

The food processing sector had opened to 100 per cent FDI in the 2016 under the automatic route. Moreover, in 2017, 100 per cent FDI under the Government route for retail trading, including through e-commerce, was allowed in respect of food products manufactured and/or produced in India. While the flow of FDI to this sector has increased over the years, its share was still low at less than 2 per cent.

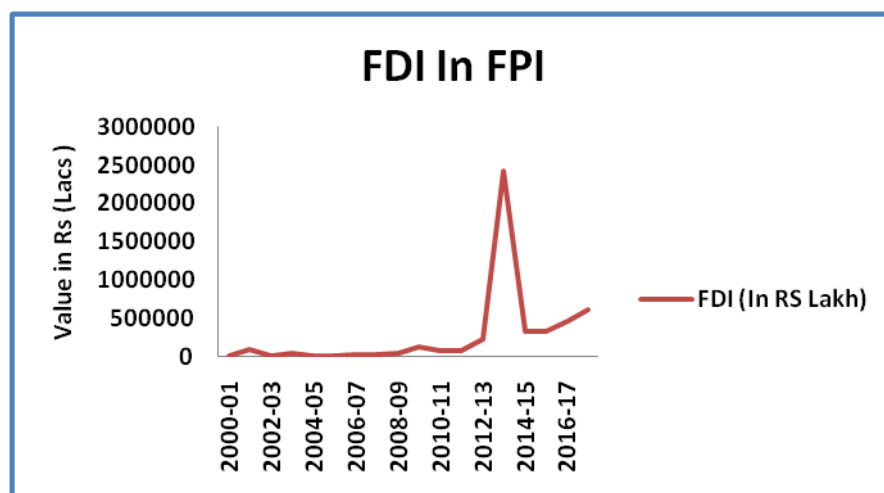


Figure 3

Source: MOFPI

Foreign Direct Investment (FDI) is allowed for almost all processed food products up to 100 per cent on automatic route excluding for items kept for Micro and Small Enterprises (MSEs) which are subject to applicable laws/regulations, securities and other conditionalities. The sector saw FDI of US\$ 2.23 billion in 2012-13, wherein MNCs (HUL, Nestle, Pepsico, Cadbury) invested heavily in India. As India has a high possibility to grow due to rising demand for branded foods and export for value added food, in which India has a great production advantage.

Food Processing and Factories

The factory is termed as any premises where manufacturing work is carried out with or without the use of power. The factories in this context are specifically related to the food processing industry which include slaughterhouse, food packaging plant, cannery, meat packing unit, fish processing etc. The graph shows that from 2000-01 to 2009-10 there was a constant growth in the establishment of the factories and then for a year, the factories saw steep rise and from 2010-11 to 2017-18 there was a constant rise. As 2010-11 years marks a tremendous growth in the agricultural production thus providing lot of raw material leading to rise in business.

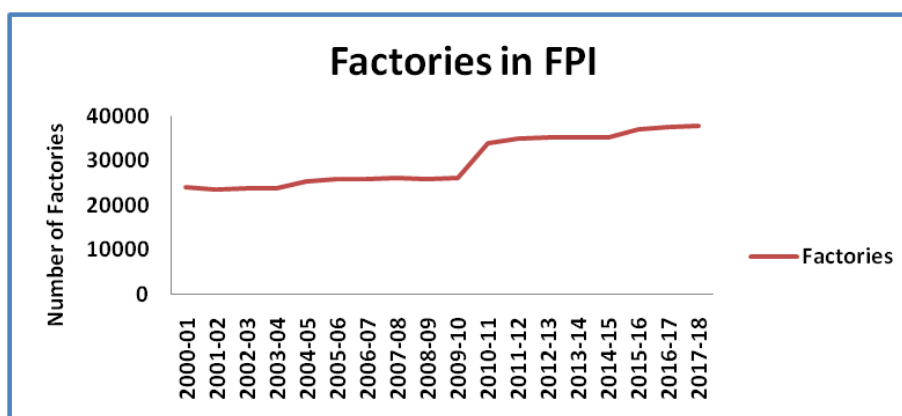


Figure 4

Source: ASI

Food Processing and Capital

The capital is described as a sum of money which a person uses to start the business, or it is the amount which a person invests to make more money. Fixed capital includes assets that are not consumed in the production of goods or services. The example of fixed capital is plant, machinery etc. From 2000-01 till 2010-11, there was a gradual increase in the fixed capital. A steep rise was seen in the year 2010-11 due to boost given to the manufacturing and agriculture sectors which were badly hit due to recession.

Productive capital means physical capital utilized in the means of production and labour power. From 2000-01 till 2010-11, there was a gradual increase in the productive capital. A steep rise was seen in the year 2010-11 capital due to bumper production and a good year for agriculture coupled with Fixed capital. Investment capital is also known as the financial capital which is utilized to acquire equipment and plants needed to make the products. The graph depicts that there was a gradual increase in the invested capital, however the year 2009 to 2011 showed an inverse trend vs the above two capitals owing to depression years and slow recovery of equity sector

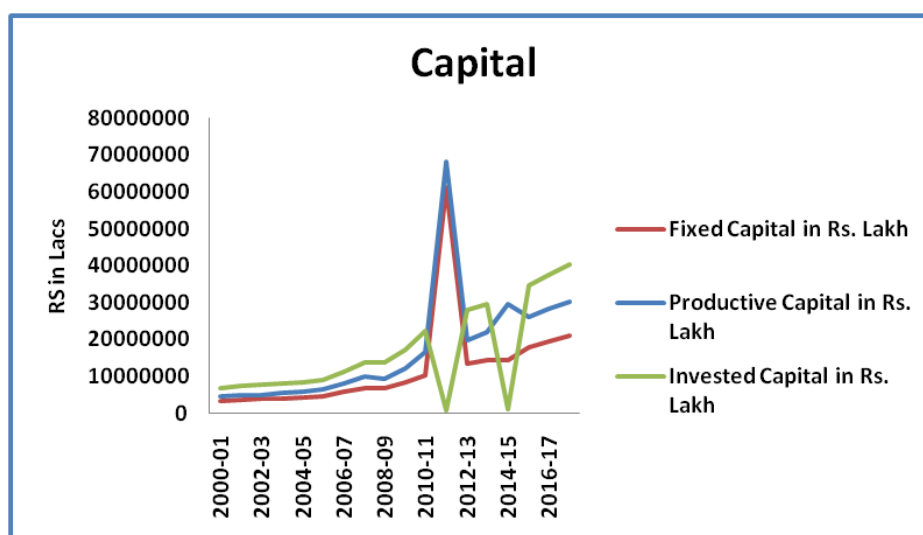


Figure 5

Source: ASI

Food Processing and Workers and Wages

Workers are the persons engaged in the several stages of production, packaging, and processing of the goods. Their job is to receive food items, operate food processing equipment, mixing ingredients, assessing food quality etc. According to the graph, the number of workers were stagnant during 2000-2010. Then for a year, a steep rise can be seen followed by steep decline. Again, trend shown constant numbers with slight increase and decrease for a year. In the year 2013-14, MGNREGA accounting for 41 % of the total MoRD budget which pushed a lot of labor from agri sector to MNAREGA

Apart from the workers or labourers, the persons who are engaged in the food processing industry are millers, processors, exporters, quality controllers and assessors etc. The total number of persons engaged in the food processing industry have also shown constant line with decline in the year 2012 but in the following year it has arose again with the constant numbers in the later years.

Wages have been described as the remuneration given to labours for their time and effort they have put in their job. It is given according to the contract and fixed either on time or production basis. Examples of the wages are commission, bonus pay, overtime wages etc. From the graph, we can infer that from 2000 till 2011, the wages that were given to workers have shown slight increase but from 2011 till 2013, rise can be seen with decline. In the later years, the wages have been increased although improvement and decline are significantly visible.

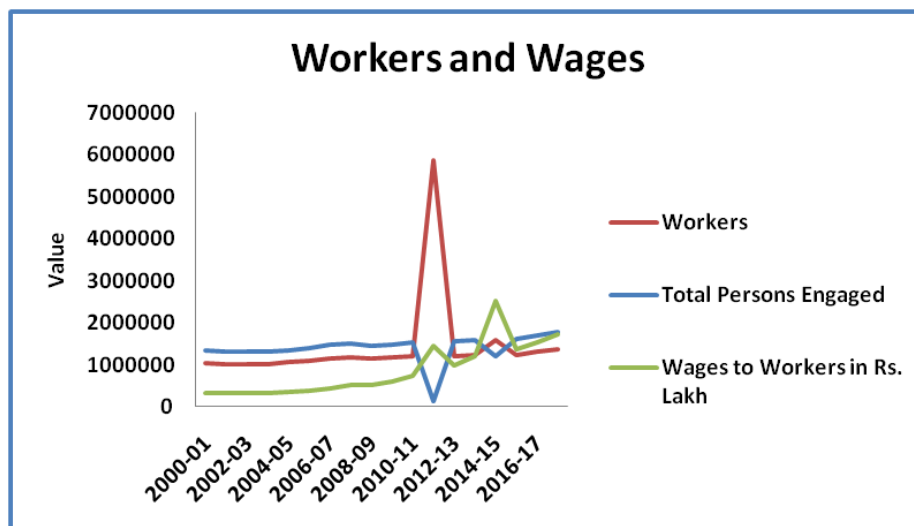


Figure 6

Source: MOFPI

Food Processing and Input and Output

Inputs for any process are land, labour, capital and entrepreneur. These are also known as factors of production. If we consider food processing industry, we can see that from 2000-01 till 2008-09, the value of total input is showing an increasing trend. For the year 2010-11, decreasing trend can be seen with an immediate increase and it has been increasing till the research study has been conducted.

Output for any industry is the finished goods. In the case of food processing industry, it is the processed food which is considered as the output. In the above graph, the value of the output is shown. From year 2000-01 to 2002-03, the value of the output has shown constant line but in the 2004, it has declined tremendously with an immediate increase.

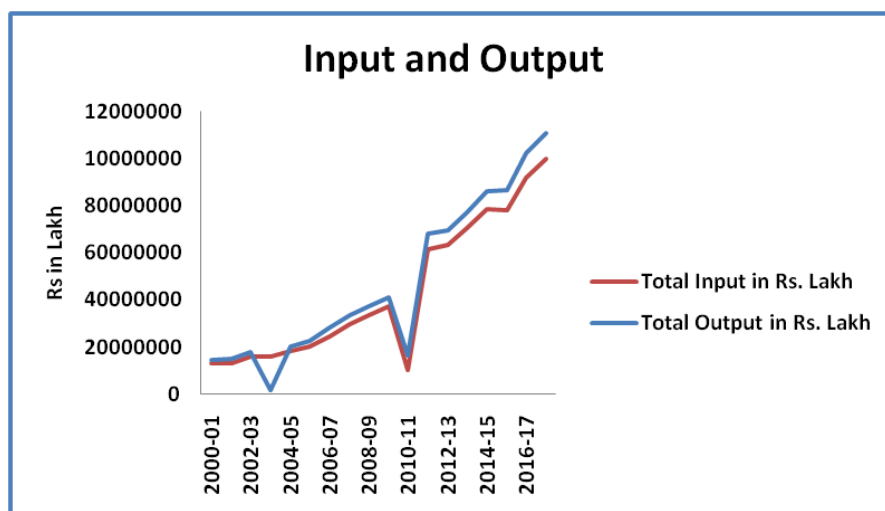


Figure 7

Source: MOFPI

Food Processing and other Production Variables

In simple terms, depreciation means the decrease in cost of the asset over the time, for example, decrease in the value of the factory equipment, due to the wear and tear of machine or asset. In the accounting terminology, it is the method by which cost of physical asset is allocated. Moreover, it also indicates how much value of an asset can be used up. From 2000 to 2010, there has been any growth or decrease in the depreciation while in 2011 it has increased steeply with the steep decrease and later on continued as constant variable.

From 2000 to 2005, net value added was constant and then shown a gradual growth. Slight decrease can be seen in the year 2010-11 and then gradual increase can be seen from 2012 to 2018.

Rent is considered as the excess of payment made to and for the factors of production. It may be represented as the difference between the total return to a factor of production (land, labour, or capital) and its supply price—that is, the minimum amount necessary to attain its services. From the graph we can infer that in the research period the rent paid for the factors of production was constant and shown slight increase/ decrease from the year 2010 to 2012.

Interest is the payment from a borrower to a lender of an amount above repayment of the principal sum at a particular rate. If we consider interest on the factor of production, it is defined as the income earned by owners who had put in capital combined with land and labour. In this context, we are considering interest on loan. The interest paid during the research period have increased gradually and slowly.

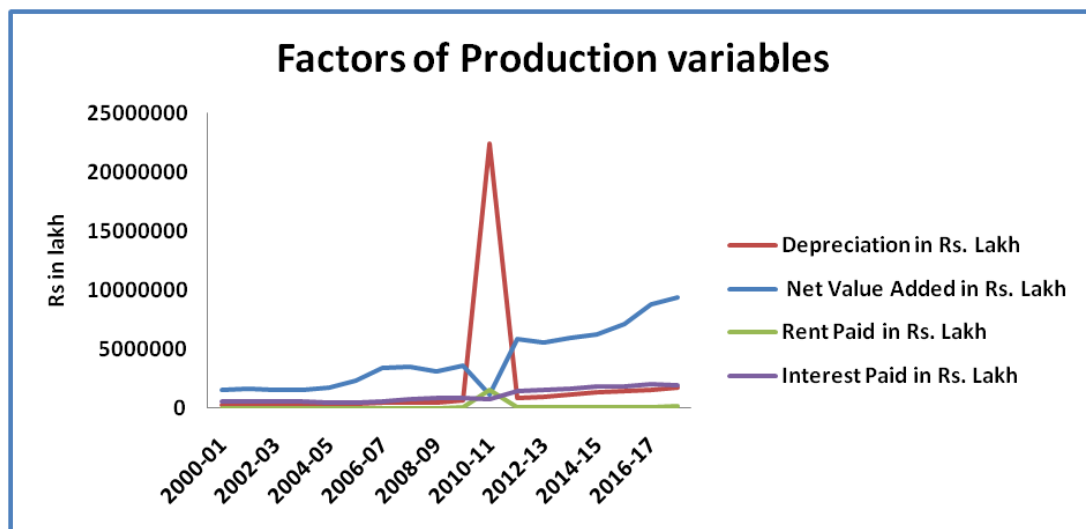


Figure 8

Source: MOFPI

Key Features of Indian Food Processing Industries: Interpretation

Table 2

Description	Food Products	Beverages	Textiles	Apparel	Leather	All Factory Unit
Division*	10	11	13	14	15	
Factories (no's)	34,884	1,997	18,790	9,168	4,049	2,17,554
Employment (no's)	16,29,161	1,47,482	14,58,073	9,22,725	3,04,811	1,34,29,956
Share of total employment	12.13%	1.09%	10.86%	6.87%	2.26%	100%
Fixed capital to output	0.18	0.42	0.4	0.22	0.2	0.34
Output per employee	41,80,303	36,14,085	20,21,470	8,44,567	11,78,150	43,00,85

Source: ASI

It can be interpreted from the above table that out of all the industries “Food Products” generates the highest employment (12.13 %) which is followed by “Textile “s (10.86 %) and least in “Wearing Apparel “(6.87 %). As per the capital requirement, fixed capital to output ratio is 0.18 suggesting food products need less capital for producing on unit of output, in terms of value in comparison to other labour-intensive industries. Therefore, every specific unit of capital capitalized in this industry retains highest number of employers as compared to other industries while producing the largest output level as in other industries. Thus, food Processing industry is maximum employment intensive segments constituting 12.43% employment generated in all factories in 2017 (Source: ASI)

CONCLUSIONS

Although India is chief producer & trader of agricultural produce at early stage, still hardly less than 11 percent of them, are processed & traded. One of the main reasons of this is due to the huge base of consumers domestically and having huge preference for fresh produce over processed food. The study depicted that profitability of food processing firms has been either higher or at level with other sector firms. With the rising urban and young populations which are having huge demand for processed food items is to rise in the coming years. The FPI needs to grow to meet the soaring demand by capitalizing in essential infrastructure. The industry needs a continuous supply of raw material from the farmers specifically meting the quality standards and at affordable prices. Various farmer producers’ organisations can help to establish more stable supply chain by bringing together small and marginal farmers and agriculture entrepreneurs. Along

with safeguarding continuous flow of income to the farmers, larger industry linkages with food industry could also help to eliminate the wastage especially in perishables.

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